

Department of Water Resources Climate Change Program December 2014



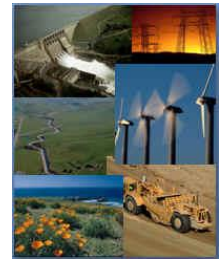
The California Department of Water Resources (DWR) has 12 full time staff in its Climate Change Program to support climate change activities across the State. Specialists in both adaptation and mitigation are located in Sacramento and four regional offices. The goal of the program is to provide regionally-specific climate change information to local water managers and to support all DWR programs, projects, and documents by providing access to the latest research, data, tools, and guidance for California's unique water management issues related to a warming climate.

RECENT ACCOMPLISHMENTS & CURRENT PROJECTS

Climate Action Plan Phase I: DWR Greenhouse Gas Reduction Plan

Phase I of DWR's Climate Action Plan covers mitigation of greenhouse gas (GHG's). This plan lays out steps to cut the Department's GHG emissions by 50 percent below 1990 levels by 2020, and 80 percent below 1990 levels by 2050/

<http://www.water.ca.gov/climatechange/CAP.cfm>



Climate Action Plan Phase II: Climate Change Analysis Scenario Selection and Guidance

Phase II of DWR's Climate Action Plan will be a framework and data toolbox to guide analysis of the effects of climate change on DWR projects and activities. The project will ensure that all DWR projects meet standards for consistency, quality, and adequacy in climate change analysis for planning activities. This guidance may provide assistance to local water managers, as well.

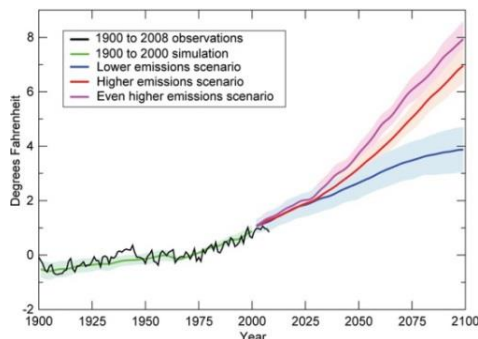
Climate Action Plan Phase III: Climate Change Vulnerability Assessment and Adaption Plan

Phase III of DWR's Climate Action Plan evaluates the vulnerability of DWR facilities and operations to key climate change impacts, and develops adaptation strategies to improve DWR's resiliency to climate change.



Climate Change Technical Advisory Group

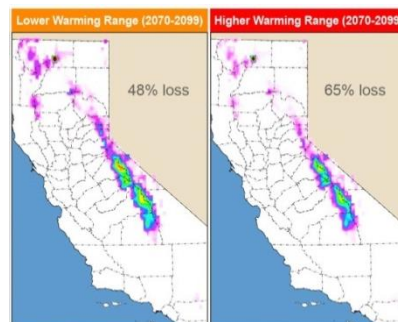
DWR's Climate Change Technical Advisory Group (CCTAG) is comprised of 15 climate change experts in the disciplines of atmospheric science, hydrology, civil engineering, environmental science, climate data, social science, resource economics, land use planning and climate modeling. The panel provides guidance on climate change impacts and adaptation for the California Water Plan and other DWR programs, including scientific review of climate change models and scenarios and interpretation of scientific information produced by the National Climate Assessment and the Fifth Assessment Report of the Intergovernmental Panel on Climate Change.



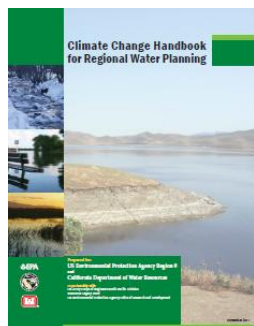
California Water Plan Update 2013 Climate Change content

The Climate Change Program expanded strategies for adaptation to a changing hydrology, and mitigation of GHG emissions for water use:

- ◆ Statewide impacts and strategies for adaptation
- ◆ Energy intensity of raw water extraction and conveyance
- ◆ Regional-level climate change trends and vulnerabilities
- ◆ Decision support for future climate scenarios
- ◆ Rain/Snow Trend Analysis for major watersheds



IRWM Support



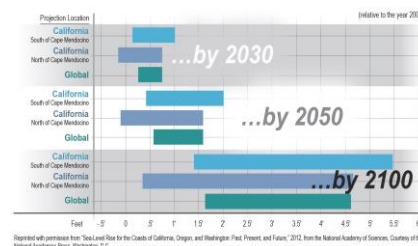
Integrated Regional Water Management (IRWM) plans require evaluation of water systems adaptability to climate change and consideration of GHG emissions for identified programs and projects. DWR's Climate Change Program assists with developing and identifying resources, data, and technical assistance and outreach to IRWM planning groups, water agencies, and local governments to mitigate for and adapt to climate change. A Climate Change Handbook for Regional Water Management was developed to assist IRWM groups with climate change analysis. The handbook presents key decision considerations, resources, tools, and decision options for adapting to a changing climate.

<http://www.water.ca.gov/climatechange/CCHandbook.cfm>

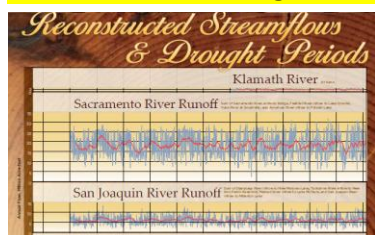
National Research Council (NRC) Sea Level Rise Study

This report provides estimation of sea level rise specifically along the West Coast for 2030, 2050, and 2100. These projections will be used for planning purposes in California. DWR served as project manager for this study with other State agencies, Washington, Oregon, and the federal government.

http://www.water.ca.gov/climatechange/docs/NRC_SLR_Draft-06-22-2012.pdf



Paleoclimate Tree Ring Studies



DWR commissioned development of long-term reconstructions of stream flow or precipitation for the Klamath, Sacramento, and San Joaquin River basins by researchers at the University of Arizona. Paleoclimate information is useful for understanding and modeling natural variability in the climate system and may provide clues for improving drought prediction at the seasonal time scales important for water management.

http://www.water.ca.gov/waterconditions/docs/tree_ring_report_for_web.pdf

Drought and Climate Research

DWR is funding climate research to improve sub-seasonal to seasonal climate forecasting to enable more efficient water management. Research is also being funded to develop a better understanding of long range climate oscillations and whether these signals have any predictive capacity for drought.

For more information or questions about the program, please email climatechange@water.ca.gov or go to: <http://www.water.ca.gov/climatechange/>